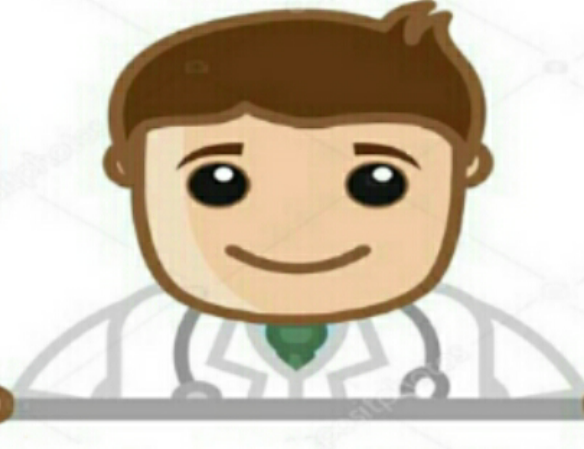




جامعة صنعاء
كلية الطب والعلوم الصحية
دائرة العلوم السريرية الطبية
دفعة بصمه طبيب 31
طب بشري

Derma

Lecture No.



محاضرات كورس الجلديه
العملي

هشام الشنيف - منال المحيا

اللجنة العلمية ((C)) Group

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© ضياء الحق الصريمي

مندوب المجموعه

مسعد الصيادي

VISIT...

LANZAROTE
Caliente.COM

- Dermatology

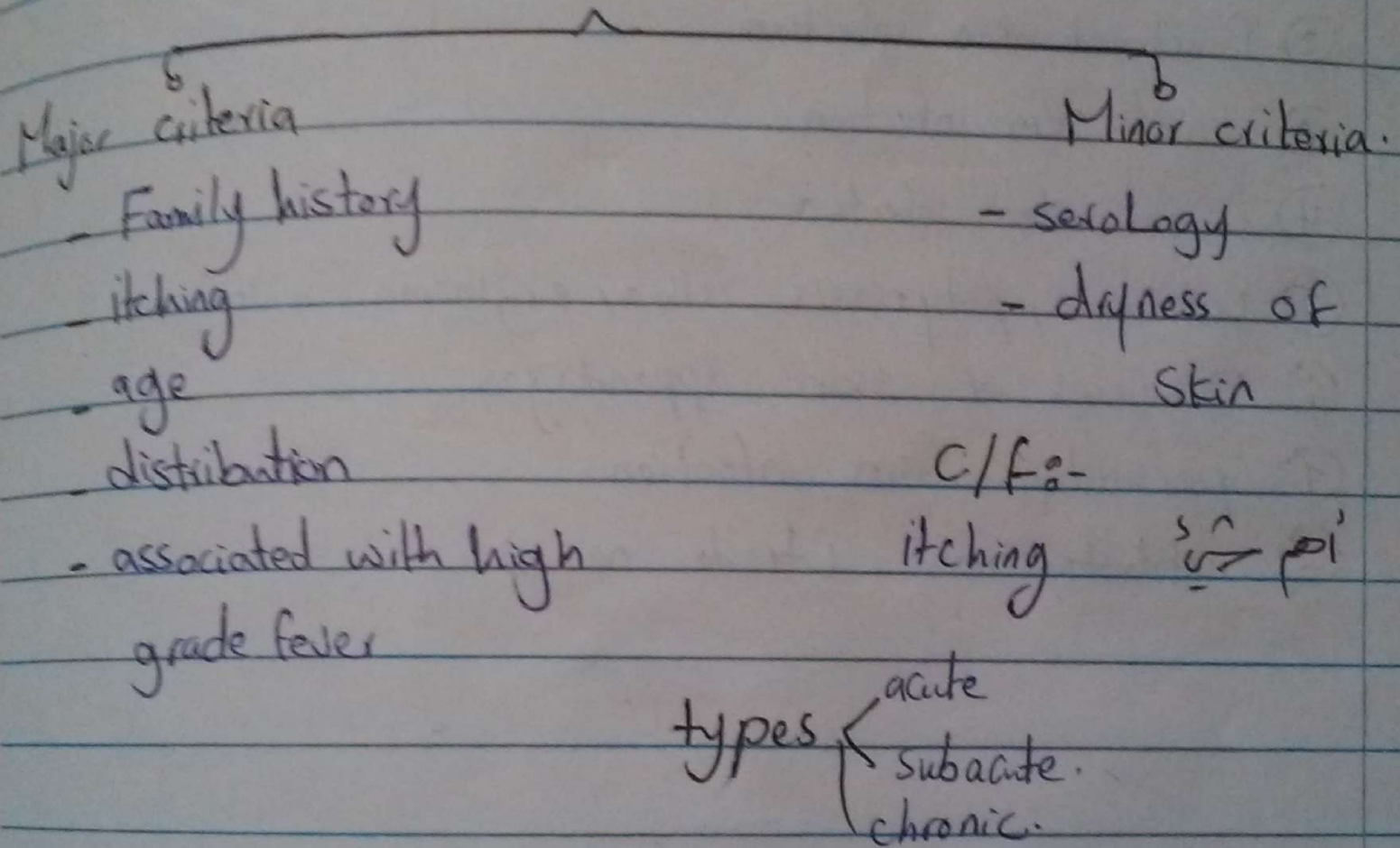
Contents:

- ① eczema (dermatitis) + topical steroids.
- ② Bacterial skin infection.
- ③ Viral skin infection
- ④ fungal skin infection.
- ⑤ Urticaria, pityriasis alba, erythema multiformis
- ⑥ Diseases of skin appendages.
- ⑦ parasitic skin infection.
- ⑧ antihistamine (trade names)

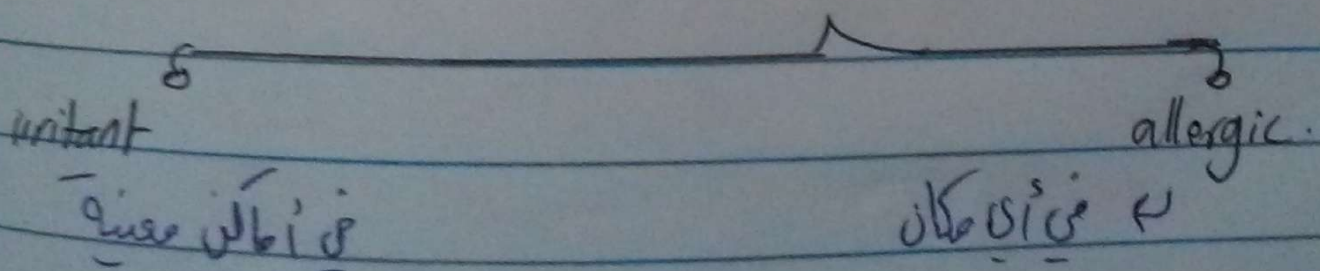
* eczema (dermatitis.)

Atopic and contact dermatitis.

① Atopic dermatitis diagnosis.



② contact dermatitis.



management of dermatitis:

① instruction:-

تجنب أي شيء يسبب الحكة
تجنب الاطعمة المسببة للحكة في الحكة
تجنب الحكة لوقت الاكل
ارتداء ملابس قطنية وكنز الألبان

② topical steroid:

ابدأ بدهان (steroid) بعد بنظف

Bentovate cream

دهان صباحاً ومساءً مرة لا تتجاوز على أسبوع

N.B: in face — Non fluorinated steroid

نصف

① elocon

② Dermatop cream

③ perterm cream

N.B:-

2nd Bacterial infection لوضي

Steroid + مضاد حيوي

fucicorb cream



N.B:

إذا كان المكان مريضاً

injured skin

use strong Antibiotic.

① fuciderm

② fucidine cream

③ topical soothing agents.
trade names.

① Calamul⁺ lotion

② Bringo lotion

③ pathenol cream

③ systemic treatment.

① oral ↓ histamine
anti

1st generation

- allergy.
Telfast

Secondary generation

- Zyrtec
- Lorano

- clarine
- Tavegel.

اليوم: / /

الموافق: / /

٢٠ م

N.B:

Seborrheic dermatitis.

Red scaly lesion greasy scale with.
predilection to Body fold
treatment.

Topical steroid

+

keratolytics

e.g: Dipro Salic solution.

Corticosteroid.

Topical steroid.

⊗ Mild potency.

- hydrocortisone 1,2 5%
- predn carbate (dermatop)

* Moderate potency (أقوى ٢-٢٥ مرة)

- fluticasone (Cutivate)
- Clobetasone (eumovate)
- Al colometason

* high potency. (أقوى ٥٠-١٠٠ مرة)

- Betamethasone (Bentovate cream)

- Mometasone fuorata.

elocon, elocortin cream.

هذا النوع Non fluorinated وآمن في

استخدامه في له مرة

⊗ very high potency

clobetasone propionate (dermowate)

N.B:-

اللدن تفرزوان لقوة لا يجب أن يستخدم في الاطفال وفي ال face

S.E:- Skin atrophy, hypopigmentation

topical steroid.

cream



if acute lesion (wet)

ointment.



if dry (chronic)

Some trade names:

① Betamethine

- Betaterm 0.1%

- Betamethasone 0.05

- Betaval

- Bentovate

② clobetasone

- eumovate

- elovar cort

③ fluticasone

- cultivate

- Topicon

④ hydrocortisone

hydrocortisone 1%

hydrocort 0.1%

micort

⑤ mometasol (elocort, metaz, elocortin)

⑥ predn - o dermatop

⑦ Triamcinol - o Topical



الواجب :

systemic steroid.

Some trade names:

① hydrocortisone
Solucortef

② prednisolone

Hostacortin

Solu pred / prednil

③ Dexa

- Dexamethasone 8 mg

- Dexazone / deltazone, apidone, phenadone.

④ Betamethasone

Betasone 0.5 mg tab.

pyogenic skin infection.

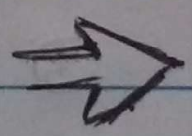
viral

fungal

Bacterial

parasitic.

will start with Bacterial infection



Bacterial skin infection.

Impetigo

AE: Staph, Strept

types:

- Contagiosum.

- Bullous → Bullous

- Circinate

* Contagiosum

Site: face

Vesicle on (OEB)

Typically on the face
rupture

Seropurulent discharge
to form gold/yellow
crust

② Non Bullous.

Fragile fluid filled or
flaccid bulla

(primary lesion is
Bulla)

OEB

AE: Staph

most common Site:

trunk.

③ circinate

peripheral extension with
central healing
may result of bullous
impetigo.

N.B: triteco soap

مد تصيف ← bd

impetigo

التهاب

المصابة

موضوع الدرس:
التاريخ:

Ht of impetigo

① Ht of any predisposing factors.

② topical antibiotic
fusidic acid

fucidem cream/cream/oil

- fucidine cream

هذا الدواء

Bactroban cream

أقوى

③ antiseptic solution

drying lotion $\frac{1}{8000}$

K permanganate

Remove crust

④ systemic antibiotic
indication

if infection

Generalized, associated
with fever, LAP

N.B:

1st generation cephalosporin
is the Best drug for
skin infection

e.g: cephalexin

كل يوم ٤ مرات

مع طبق

tab.

Duri cef

N.B

الجرعة واحدة تساوي

لوز

تقريباً كل ١٢ ساعة

sycosis barbae
C/F

- oedematous, erythematous
Follicular, papules or pustules
pierced by hair

Differential diagnosis

pseudo folliculitis
↓

non infectious

tinea barbae
↓

papule
pustule
with loss of
Hair
↓
KOH +

HH

① treatment of any
predisposing factor.
Shaving with clean razor

② topical AB.
fusidic acid
fusidine

- Boil

site:

face/ neck/ axilla
Shoulder/ Buttock

lesion:

Start tender

papule
↓
pustule

pus collect
↓
Abscess.



Carbuncle

cluster of Boils

Lesion:

red, hot, tender, indurated

circumscribed multiple

opening to expel necrotic material

Ht:

primary Ht of Boils.

and carbuncles include

Hot packs and drainage

the abscess

- systemic AB. for extensive or recurrent lesion.

acne keloidalis nuchae

Site

at the nape of the neck.

on the occipital scalp

Lesion:

dome shaped (keloid like)

papules, plaques and pustules.



scarring

Ht

① treatment of any predisposing factor.

② topical treatment

fusidic acid or mupirocin cream

- fusidone.

③ systemic → for severe resistance.

cellulitis

acute / subacute

Bacterial infection of
the dermis and SCT

AE: Staph and strept

C/F

site: face, legs.

- FAHM

- red, tender, swollen

ill defined or well

demarcated skin lesion

with possible →

formation of vesicles

or bullae

+++

systemic antibiotic →

aggressive antibiotic

bd 7⁰⁰⁰ 1m

for 5 days

erysipelas

face, legs

FAHM

الجلد

- well circumscribed
- defined advancing
edge

↑ pustules, bullae
it affect skin of
L.L

but in face → CK
butterfly distribution
on the cheek and
bridge of nose

- different from cellulitis by
well defined, raised border

+++:

rest in Bed

systemic AB.

penicillin are the best

١٢ ٢٤ ←



intertrigo

Def: describes an inflammatory condition of Body folds that present as moist lesion erythema and scaling

AE (DD)

strep
infection

Friction

Flexural

condition

↓

contact

dermatitis

↓

psoriasis

and tinea

C/F.

early eroded

slight maceration
and erythema.

Ht of Bacterial
infection

frequent washing

topical Ant

K permengnate

fucicort or

1/8000

gentazone.

4 times/day.

DD of intertrigo

tinea

cruris

candida.

red patch

red patch and
raised edge

and satellite

② Seborrheic dermatitis

③ Bacteria

④ psoriasis.



NB: antibacterial soap → can be used to prevent

recurrent.

erythrasma:

common mild localized

skin infection affecting

the skin folds

e.g. axillary groin

→ wood light

causes the erythrasma

to fluoresce

coral pink color

AE:

Cornobacterium

lesion:

sharply demarcated

patches of erythrasma

that are initially pink

but progress to

↓

become brown and scaly

covered by fine scale

as skin starts to shed

The condition can be confused

with other causes of intertrigo

① instruction

أفضل علاج

② topical fusidic

acid

أفضل علاج

③ topical antifungal

- Dermatin

- Batrafen or

miconazole

أفضل علاج

أفضل علاج

أفضل علاج

④ systemic ABs

erythromycin 500mg tds

أفضل علاج

أفضل علاج

paronychia
inflammation of nail

fold
AE ← Staph
Stropt

DD

chronic paronychia acute paronychia.

↓
fungal infection
- painless
- No signs
- occupational
 ↓
 food handler
- absence cuticle

↓
Bacterin
↓
pus
↓
tender
↓
inflammation

+++
acute.

- warm water
- amoxicillin
- surgical incision and
 drainage of abscess
 forms.

chronic
avoidance of inactivity
factors → skin irritation
② cotrimoxazole.
and or fluconazole

N.B

paronychia ——— أَمَّ سَيِّ غَرَّةَ بَيْنَ
onycho sis.



الواجب :

الحبش التي تظهر فطالين
لشعاف بعد دور البرد

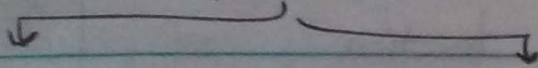
provoked by fibrile illness,
psychological factor.

* viral infection

AE: ① HPV → warts

(Verruca)

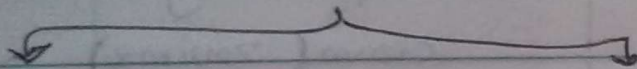
② Herpes simplex.



type 1

type 2
genital infection

③ varicella zoster virus.



varicella

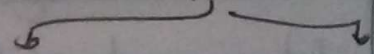
herpes zoster

chicken pox.

④ pox virus

molluscum contagiosum

① Herpes simplex.
type 1



primary
its

first time

recurrent
its

reactivately
periodically

primary attack.

usually in children

Lesion

Small superficial
vesicles (small lesion)

are painful and
accompanied with

FAHM

prodromal stage

certain site.

① herpetic gingivostomatitis

② " keratoconjunctivitis

③ " genitalis

④ anorectal Herpetic.

② HSV types

herpes genitalis.



C/F → characteristically

painful grouped OEB

superficial vesicles followed

by erosion or genital

ulceration

- indication for C/S in pregnancy.

Diagnosis.

- History

- p/E

- Lab investigation.

- serologic test HSV antibody

- viral culture.

- PCR.

+++ of Herpes simplex

(A) General measure

① Avoidance of triggering factor → to prevent reaction.

② Avoidance of direct sexual act during attack.

(B) Topical treatment.

① Topical Acyclovir 5% cream (Zovirax)

5 times/day.

is effective only when

given early during prodromal stage

within 48 hours.

③ topical antibiotics
for secondary bacterial
infection.

N.B

القرصين

Impetigo

herpes

- vesicle

- papules

↓
pus (pustule)

after cold

- crust

- vesicle

يَبْقَى بَصِيرَةً

clear fluid

قَوَّةَ أَوْجَعِي

- on

أَيِّ مَكَانٍ

mucocutaneous

Junction.

④ systemic treatment.

① anti viral drug

Acyclovir (Zovirax)

200 mg 5 times / day

for 5 days.

N.B: it should be administered
early within 48-72 hours from
appearance of eruption

⑤ systemic analgesic.

N.B → chicken pox → direct droplet.

- varicella

(chicken pox)

الجدري

VZV → usually children

- varicella (chicken pox)

- prodromal stage

- polymorph & macules, papules,
vesicles, pustules, finally

crust

يُتَمَرَّضُ فِي

- centripetal

(trunk, face, scalp and neck.

- pruritis

- healing occurs with 10 days
without sequelae

- permanent vesicle scar

لا يترك ندبة

Ht of chicken pox.

Ⓐ instruction

التعليمات

① No scratching

② No contact with pregnant
↓
abortion

③ No contact with
other children

Ⓑ topical soothing agent

- Bringo lotion

- Calamine lotion

الحلقة الجارية

الحلقة الجارية

الحلقة الجارية

③ oral thiamine
1st generation anti

Tavegil syrup.

تافييل سيريپ

④ topical antibiotic or
antiseptic

كم پرمنگنات

فوسيدين كريم

fucidine cream

Herpes Zoster

الحزام الناري

Def: latent viral
infection after having
chicken pox activated
years later.

Lesion:

Start with unilateral
pain affecting specific
dermatome on one site
of body of any
character but usually
burning pain and
parasthesia / followed
by vesicles.

III

المعالجة غالية يفضل تحويله
إلى أمضائي
طائفة المريض بأن الطبخ
يخصن في خلال 1-2 أسابيع

① topical treatment.

- Lignocaine gel
دهان على سطح الجلد
2-3 مرات يومياً

② topical antiseptic and
antibiotic as above

③ systemic treatment.

- systemic antibiotic

Duricef 500 mg cap

كبسولة كل 12 ساعة

لمدة 8-10 أيام

② antiviral

أفضل النتائج إذا استخدم

① علاج علاوة أيام من ظهور

الطفح مع أدوية DM

- Acyclovir 800 mg

قرص خمس مرات يومياً

كل أربع ساعات لمدة خمسة
أيام

- Valtrex 500 mg

أو سهل استيعاباً

③ systemic anti neurogenic
pain

يبدأ بعد انتهاء الـ

acyclovir

أو من البداية في حالة

عدم استيعابه ↓

gabapentin 100 mg

أول يوم كبسول - اليوم الثاني (2)

اليوم الثالث (2)

ثم كبسولة ثلاث مرات لمدة

سنتين

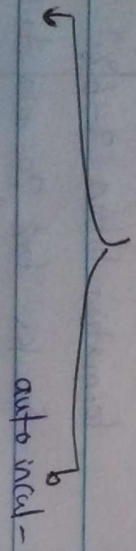
viral warts

AE: HPV.

Clinical types:

- acne vulgaris الأكزيما
- acne plana الأكزيما
- acne filiform الأكزيما
- acne plantaris
- Genital warts.

Mode of transmission



Direct skin action.

Contact

HH

HH of warts.

الأكزيما

- electrocautery.
- chemical cautery
- salicylic acid
- 10% in case of plantar wart

- Salicylic acid and acetic acid in flexible

- ③ Cryo therapy with liquid nitrogen
- ④ laser HH with CO₂ or pulsed dye
- ⑤ topical keratolytic e.g. retinol acid.

Ht of m. contagiosum → squeezing followed.
 cryotherapy
 ↓
 phenol.

⑥ Genital warts

Condyloma acuma
 characterized by
 soft pedunculated
 grayish cauliflower
 mass

it affects the vulva,
 vagina and cervix in
 female and glands and
 penil shaft in men

~~DD~~

Condyloma lata of
 syphilis.

Ht

العلاج بالليزر
 : ٣, ٤

in genital warts
 are treated by
 podophylline in

tincture penzoid
 (aldarone)

C.I in pregnancy and

plane warts
 on extensor surface of
 hands

multiple skin colored
 smooth papules with flat
 surface

Ht ✓ plantar warts
 Salicylic acid 4%

↓
 formation lotion 3-6%

Soaks for 20 min daily.

Ht of plane warts.
 topical tretinoin

تضيق العروق
 أو بليزر، وعسل

٥-٧ (٢-٣)

fungal skin infection

Dermatophytes

P. versicolor

candidiasis

types

antifungal drugs

① systemic antifungal drugs

is $\overline{a}g>81, \omega^{\sim} - r$

- Amphotericin B
- Fluconazole
- itraconazole } triazole
- voriconazole

① Amphotericin B.

for candidal infection

used only in fatal systemic fungal infection
(immuno compromised pt)

dose:

250 mg / kg / day.

triazole

① Fluconazole

cross BBB

drug of choice →
fungal meningitis

Trade names:

- flucoral 150mg

- Diflucan 50mg/ml.

cap vial or syrup.

S.E: minimal

Dose:

oral: 150 mg single
dose one capsule.

Uses:

- Candida, tinea

أفكأا / حاببة

GIT hepatotoxicity.

② itraconazole

trade names

- Sparanox 100 mg

- Itranox 100 mg

- Itracon 100 mg

الجرعة لبسولين يومياً لمدة
١ أسبوع

topical antifungal

① terbinafine

trade names:

- Lamisil 250 mg

- Terbin 250 mg

الجرعة قرص ٢٥٠ مجم

يومياً لمدة العلاج

١ إلى ٦

Onychosis

T. corporis

2-6 weeks

6

12

weeks

weeks

hand

foot

- Griseofulvin 125 mg

الجرعة قرصين كل ١٢ ساعة

١٠ mg/kg/day

تجنب على الكوامل

Nystatin

يسمى في

oral and cutaneous candida

- Mycostatin cap

- Nystatin oral drops

clotrimoxazole → skin
fungal infection

- Dermatin

- Candistan

- miconazole oral thray

- miconaze vaginal

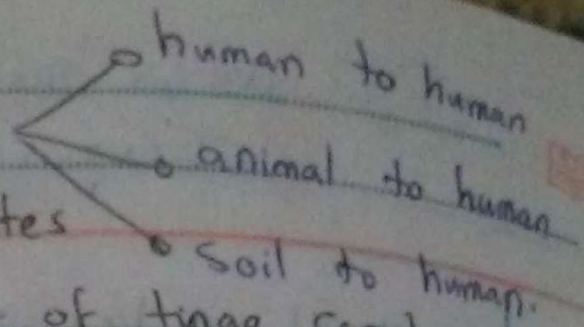
- Daktarin

- Ticonazole Trosyd

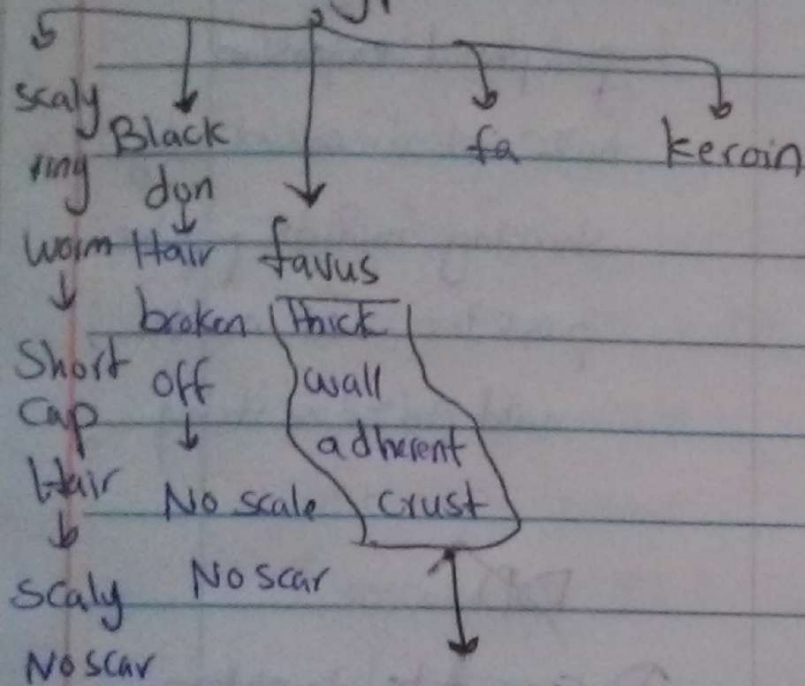
- ketoconazole

- Nizoral, Nizepa

Mode of transmission of dermatophytes



Tinea Capitis affect scalp types.



~~DD~~

- psoriasis → Silver crust
- S. dermatitis → fine crust
- Tinea Capitis → Adher

and ~~DD~~ of localized non cicatricial Alopecia

Ht of tinea capitis.

alopecia
scales black dots
remenant of falling hair
tinea II

Systemic anti-fungal
Topical anti fungal

topical Ht

① whitfield ointment or tolnaftate cream (Batrafen) or azole-cream

ملفات هراک اطرافها مرتفعه عن الجذر

T. Corporis

مرکزها شکله طبیعی

② Scalp Shampooing with
ketoconazole Shampoo (Nizoral)

or

selenium Sulphide Shampoo
(Selsun Blue)

twice weekly.

② systemic treatment.

Griseofulvin 12.5 mg/kg

(one tab/10 kg) with

maximum of 6 tabs given

for 6-8 weeks.

② other oral antifungal

Ht for tinea capitis

include terbinafin

itraconazole (sporanox)

Itapex 100mg

ابسولین ۱۰۰ میلی گرم

۱ - ۲ بار در روز

② tinea corporis

- circinate tinea

central healing and

peripheral extension

with active raised edge

showing minute papules

pustules and crust

mild to severe itching

~~DD~~

① Circinate impetigo

② pityriasis rosea:

the edge is not

raised, the scale

are foamy

- negative direct

micro organism.

قبل وضع الكريم أو لسان مع تفصيل المنطقة
التي وضع عليها مرارا

N.B

Itt of tinae corporis

① topical treatment.

(for localized lesion)

topical antifungal

Tolnaflata cream

(Batrafen)

- Dermatine cream 1%

(clotrimoxazole)

- Miconaze cream

(miconazole 2%)

- Lamisil cream

(terbinafin)

applied twice daily

for 1-3 weeks

مرتين في اليوم لمدة 1-3 أسابيع

② Systemic treatment.

(for extensive or resistance cases)

Griseful vin

12-5 mg/kg given
for 3 weeks

terbinafin 250 mg

مرة واحدة يوميا لمدة 3 أسابيع

③ Tinea cruris

common in adult male
lesion:

it present as itchy,
well defined, erythematous,
patch, with raised active
edge (like T. corporis)

- affecting the upper
medial side of thigh
and buttock.

~~DD~~

D erythrasma.

well defined brownish
scaly, with no active
edge + wood light test.

fungus infection of the nail
plate (onychomycosis)

most common nail

abnormality characterized
by

the affected nail appear
yellowish or greenish
lusterless, brittle

and friable

subunguic hyperkeratosis

زيادة في سماك الظفر
أو القدم مع تغير لون الظفر
للأصفر أو الأبيض وتشققات
في الظفر وانفصالها إذا

لم تعالج

N.B: تشيف تتميز بها عن ال

pityriasis

- pse على الاظفار

= pitting

- oil drop

111

① instructions:

غسل القدم بإستمرار مع تدفئة القدم
ممنوع استعمال صابون أو هذا
الملابس، الجوارب بتم غسلهم وتغييرهم
عدم المشي حافية في المنزل

① Topical antifungal

Batrafen

troserd nail solution

28% (8LE)

② Systemic antifungal

Itraconazole

Itrapex 100 cap

كبسولتين في اليوم لمدة شهر

ونفس في الظافر اليد أو

ثلاثة أشهر في الظافر القدم

② tre flucon

150 mg

كبسولة مرة واحدة أسبوعياً

لمدة ستة أسابيع في

الظافر اليد

أو سبع الظافر القدم

N.B:

أهم حاجة تفريق بين

onchomycosis

في الظفر نفسه

paronychia

في المنطقة

التي قبل الظفر

لأنها تلك ومن متأكد من

نفس

Systemic antibiotic

+

topical antifungal.

111

① instructions:

غسل القدم بإستمرار مع تدليكها جيداً
ممنوع استعمال صابون أو هذا
الملاصق، والجوارب لئلا يتغير وضعه
عدم المشي حافية في المنزل

① Topical antifungal

Batrafen

troserd nail solution

28% (8LE)

② Systemic antifungal

Itraconazole

Itrapec 100 cap

كبسولتين في اليوم لمدة شهر

ونفس في أظافر اليد أو

ثلاثة أشهر في أظافر القدم

② tre flucan

150 mg

كبسولة مرة واحدة أسبوعياً

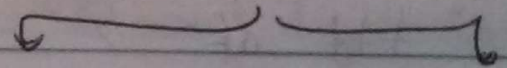
لمدة ستة أسابيع في

أظافر اليد

15 / 150 كبسولة في أظافر القدم

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* tinea pedis
(athlete's foot)

presentation

Scaling, cracked skin
and itchy in foot between
toes and most common
between 4th, 5th.

تَقْشِيرُ، هَرَسَ عَنْ أَصْبَاحِ لَقْدَمِ
و مَضْمُونِهَا الْوَالِغَةُ وَالْخَامِصَةُ

+++

① instructions

غسل القدم جيداً مع تنشيفها بإستمرار
 - مجموع استعمال الماء نصف أَرْضِيَّة خاص
 بشفط الأرض
 - تجنب ارتداد الأرض بقدر الإمكان و حاول
 ترك القدم عكسوف
 - عدم المشي حافياً

② topical antifungal

بعض استقام مضاد

للغطريات في صورة powder
في تشكيلات العقم

① Dermation powder

⑦ miconazole powder

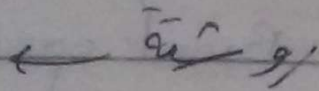
لو دره من الاصابع

↑ slow, ↑ up

③ systemic antifungal
as tinea corporis

(4) antihistamine
for itchy.

N.B:

prescription for tinea
for tinea ← 

Rx:

- Utra griseofulvin tab
1x2

Rx / Nizoral shampoo
1x1

Rx / Lamisil cream
1x2

* prescription for nail fungal
infection (Onychomycosis)

Rx Lamisil tab 1x2

Rx Trojed nail solution
↓
1x3

+++ of tinea pedis

↓
بين الاطراف

R/ Cansten solution 1x3

R/ miconazole cream 1x3

Summary of tinea
investigation.

① Direct microscope
scrap edge on glass
slide + add KOH

←
hyphae and spore

② culture

③ Wood Light exam

Violaceum

↓
No color

++

① instruction

should avoid hot, humid
sweaty weather

② Topical

- Tincture iodine 2-5%

- aqueous solution of Na
hypo sulfite

20-25% for pityriasis

versicolor

FN - white field ointment

3% salicylic acid

- antifungal imidazole

e.g. ketoconazole

③ systemic

Broad spectrum ^① anti -

- fungal

for severe extensive cases

+ Candida

② Griseofulvin fungistatic

12.5 mg/kg/day each

tab 125 mg max

6 tab

- 2-3 weeks → corporis

- 6-8 → Capitis

- 12 months → onycho -

- mychosis

CI: pregnancy,

hepatotoxic

No effective for Candida

P.V

- pityriasis versicolor

Site: neck and trunk less

common on face and scalp

الظهر والذراع والرقبة والذراع

Lesion:

well defined macules and

patches hypo/hyper pigment

covered by cigarette paper

Scales

epidemiology أنواع الفطريات

hot humid climate seat

and Summer

غالباً في الجو الحار الرطب

111

الحالة تتحسن مع العلاج

عيب أن يفهم المريض

ذلك

- instruction

لا تستخدم مستحضر

مع تشيخ المنطقة

المصابة جيداً وإرتداء

ملابس قطنية واسعة

Topical antifungal

Small lesion Large lesion

Small lesion

يفضل استخدام

الكريم

Large lesion

on hairy

area.

- Dermatin cream

لشعر

- miconaze

Nizafex

- Batrafen

Shampoo

- Lamisil

عقار خاصة بوجع

لمرة أسبوعين متتاليين لمدة ٤ أسابيع ثم رطب بالماء

N.B: In resistance cases

Selsun Blue Shampoo

أفضل شيء لكن غالي

مرة واحدة يومياً لمدة أسبوعين

③ systemic antifungal
(fluconazole is the
Best)

- flucoral Cap 300 mg/kg

- fungican Cap

تسولين الآن ثم تسولين
بعد أسبوع

prescription for p. versicolor

Rx | Nizapex Shampoo

Rx | flucoral Cap

300 mg / weeks

N.B:

Ht of dandruff

Rx: Nizoral Shampoo

Rx Nizapex Shampoo

يرغم ويترك لمدة

ساعة دقائق

٢ مرات أسبوعياً

أو العشرة زائدة

قوي مجلن

flucoral Cap

Candidiasis

describes infections of skin and mucous membrane and internal organ e.g: GI

RF:

- DM, obesity
- immunocompromised
- old individual

Clinical presentation.

Cutaneous Candidiasis mucosal Candidiasis.

- Candidal intertrigo

- Napkin Candidiasis

- Candidal paronychia

- angular cheilitis.

- oral candida

- Candida vulvovaginitis

- Candidal balanitis

① Candidal intertrigo
this refers to Candida infection of groin, axilla, and sub-

- mammary region

- often present as pruritic painful fissures in the body folds

- common in interdigital web spaces

Lesion:

presented by

well defined glazed moist
erythematous with raised
edge

the edge is lies
Satellite lesion

↓ around main
area

is erythematous papules
or pustules with rupture
to given tiny erosion

- common on DM.

obese, hot weather.

- Napkin candidiasis.

affecting the diaper area
in infant

- ill defined erythematous
lesions showing
superficial pustules on
the edge and satellite
lesion

N.B:

کیفیت ناپکین

Napkin dermatitis
candidiasis.

Napkin
dermatitis

folds / skin is

fungi
↓
skin

↓
Normal

- chronic candidal paronychia:



See bacterial paronychia
posterior nail fold is swollen
erythematous and thick, whitish
yellow material on pressure

- occupation is very important
RF

- It differentiated from
pyogenic paronychia by
absence of throbbing pain
and chronicity of the
condition.

④ Oral candidosis.
(oral thrush)

it present as
whitish-crud like
patches

(pseudomembrane)
on tongue and
buccal mucosa

- The patches - scrub
leave - raw bleeding

⑤ Candidal vulva -

- vaginitis

- pruritic condition.

- thick creamy
with vaginal
discharge.

Diagnosis of Candidal infection

history and PE

Lab investigation

Direct culture

Microscope

+++ of candidiasis

① instruction

avoidance of any predisposing factor is very important

- ① الا ستحام با حتمار
- ② مع تنظيف المنطقة المصابة جيداً
- ③ مع استخدام مضخة الفيز
- ④ الملامسة تفاعل جيداً وتقل
- ⑤ خفض مستوى السكر
- والوزن

HHH

N.B: Griseofulvin is not effective
in years

combined topical antifungal
8 weeks Steroid

itching الحكة

- Dermatin Cort cream

miconaz gel

- Dakta Cort cream

دهان كورتا وكورتا

أ - مع بعد ١ خفاد البقع

N.B:

لوفيل ١ - استخدام هذه الكريمات

حتى ١ خفاد الحكة فقط ثم

تستبدل الكريم يتوي على مضاد

مضاد فطريات حتى لا يقلل ال steroid

من تأثير مضاد الفطريات

- Nystatin cream

Systemic treatment

for extensive or

resistance cases

- fluconazole is the

Best

fluconal cap 150 mg

tab

كبسولة واحدة في الاسبوع

طبة أو رفة أ - اربع

- statin oral suspension

- Amphotericin B I.V

infusion

only for severe case

N.B:

عالية لا يتم الحقن اليها

الا في حالة

① عدم التأثر مع العلاج الموضعي

② تكرار المشكلة

③ زيادة عدد البقع

- Napkin Rash

القحطبات الحفاضات

contact dermatitis

+

- fungal infection

كيف نقرعها عن ال

- fungal infection

dermatitis



Normal inguinal fold

fungal



affect

inguinal fold

+

Satellite lesion

* prevention

تطهير الجلد باستمرار وتغييره جيداً
تقليل الحفاوفات غير دقات

III

① تغير نوع الحفاوة

في حالة تلوار الحفاوة

② مضاد الفطريات

+

Weak cortisone (hydrocortisone)

- Dermatine cort cream

- miconaz H gel

- Dakta cort

- Momenta cream

↓
أفترط

N.B:

لا تستخدم ال

Kenacomb

Strong vig

Steroid

↓
Atrophy

papular urticaria

It is hypersensitive skin
reaction to
insect bites

- affect mainly infant and
children

Sites: Commonly involve
include - extensor surface
of the limbs and trunk.

- Wheal appear at the
site of bite thin within
1-2 days.

itchy, erythematous, papules
and the centre of wheal and
remain for days, Lesions often
multiple vesicle, pustules

- secondary infection
- itching

~~DD~~

- food allergy.

- Drug allergy

- chicken pox

+++

① instruction

① قرص ليفوس - بيتر الطحل

② إذا كان المريض حشرات في الفراش

↓
لصقة وقرص ليفوس

③ ٨ قطرات الفينول - جيل

② Drugs as contact
dermatitis :-

topical steroid +

topical soothing agent

+ oral anti histamine

fena[↓]stil

- Urticaria

الحساسية الجلدية

Definition: common recurrent allergic vascular reaction of the skin characterized

erythematous swelling which is transient of the dermis and SC tissue

↓
Wheal characterized by

- elevated
- erythematous
- transient
- edematous.

AE ← infection
 ingestion
 inhalation

- drugs
- ingestion
- physical agent
- infection
- psychogenic
- idiopathic

الحساسية الجهازية

أنواع

angiodema

anaphylactic reaction

↓
laryngeal edema
suffocation

هل المريض يعاني من ضيق في التنفس
is dyspnoeic or not

+++

① emergency treatment

- I.V antihistamine

+

I.V steroid

Avil I.V Ampule

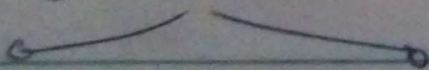
Solucortef I.V vial

N.B:

(في الاطفال نصف اعمول + نصف)

Solucortef

hydrocortisone هو



Rapid onset short action

No use dexamethasone

لا نحتاج ديكساميثازون

② Home treatment

العلاج المنزلي

topical steroid

oral antihistamine

الروبو ستيرو

Rx / Bentovate cream

لها ب أ وسادة

+

Rx / Recon 120 mg tab

قرص قبل النوم

Pityriasis alba

presentation

rounded oval patches or erythematous plaque with fine

whitish scale

5%

face

50%

neck

U.L

often in children

Causes:

unknown chronic eczema

vit E

anemia, vitamin deficiency

parasitic, prolonged topical

sun exposure.

+++

① treatment of all possible cause

- vitamin supplement

Hi vit syrup

- CBC → iron supplement

- stool → analysis

- mild potency

topical steroid

- micort cream

للحكة

erythema multiformis ^{عُرْجَانِي}

- acute self limiting infla-

- mmation condition ckt by

- Sudden onset

- systemic multiform lesion

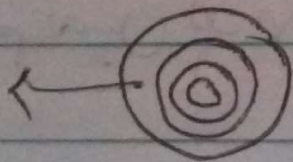
e.g : erythematous

macule, papules, vesicles,
and sometimes bulla

- Diagnostic hall mark.

iris (target lesion)

قنطرة العين
←



+++

- oral antihistamine

- topical steroid

- oral steroid → short course

- oral AB if secondary
infection.

- Drug eruption

- Drug history

- sudden after first
dose

+++

Discontinuous

oral antihistamine

topical steroid

- Systemic steroid

in severe DE

↓
5mg

prednisolone

٢ أقراص يومياً لمدة ١ سبوع

ثم ١ قرص لمدة ١ سبوع

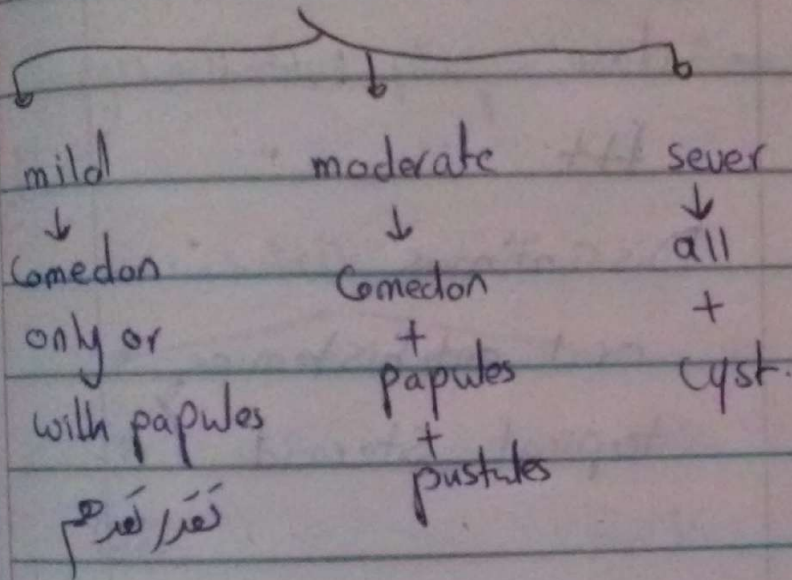
ثم قرص لمدة ١ سبوع

Diseases of skin appendages

① acne vulgaris

Comedons

Lesions:



N.B: Comedon is plug of keratin and sebum in pilosebaceous duct.

Black head
↓
open

white head
↓
closed.

+++

① mild

② Topical Soap.

- Sulfur Soap

- Synobar Soap.

③ topical AB (TCE)

Acne histic lotion.

clarithromycin

clinda solution

clindacin

تخلط (تخلط) وتكون

تحت الجلد

N.B: pustular type

نوع البثور القيحي

③ topical keratolytic agents:

① topical tretinoin
0.025 at night

trade names:-

- retin A
- Acne free
- acnetin cream

N.B: يوم خلط مع
المراد الحوي

erutin gel

④ topical azelrac acid

مراد الحوي

- Skinoen cream
- azaderm cream

هنا يتم قبل النوم
مرة نصف ساعة

③ Topical Adapalene

Adapalene gel

هنا للوجه قبل النوم مرة
أحد (ساعة) بعد حمر
(أيضاً)

④ oral zinc and vit
vita zin cap

N.B: cyproterone → in adult female may used.

② moderate acne

add systemic AB

Doxycyclin or
viramycin →
100 mg

في
الحوامل

ليوم الأول كبسولتين ثم حبة يومياً
بعد الغذاء لمدة ستة أشهر

- severe acne

as above + systemic
retinoin

isotretinoid

Dose: 0.5-1 mg/kg

في كل ٨ أسابيع

٨ أسابيع

LFT

Lipid
profile

pregnancy
test

total dose 120 mg/kg
S.E

في كل ٨ أسابيع

② miliaria (sweat rash)

الحببات

types → miliaria crystalline
miliaria rubra
miliaria profunda.

TTT

- Cold bath and air conditioned room.
- Antiseptic Soap
- Topical Soothing agent
- oral antihistamine

في كل ٨ أسابيع

Rosacea * different from acne

- age > 30 years.
- central → in face
- erythema + telangiectasia

treatment → tetracycline
1 mg/day (2-3 months)

No acne
N.B: papules
red Rose hemispheres
+ metro gel.

parasitic skin infection

① scabies

الجرب

presentation

sever itching worse at night and scratch marker in folds e.g: finger webs, wrist, elbow, axilla, groin, and never in the face except in children
- in female → submammary

Classic sign is Burrow

وجود أنفاق تحت الجلد
وكنفالا تظهر في أكثر الأماكن

TTT

① instruction

- ① كل أفراد العائلة يجب علاجهم في نفس الوقت
- ② كل فرد له لفعة وصابون
- ③ قص الأظفار
- ④ يمنع العلاقة الجنسية طول فترة العلاج
- ⑤ كل الملابس يجب تغييرها يومياً مع غسلها

other condition

- vitiligo
- PUVA: oral psoralen
- UVA exposure
- Topical psoralen
in localized form

Skin hyperpigmentation

زخات 8.10 قرص 2,
قرص 1

R

spotlessva Soap
1x2

R

Lucoacid 1x1

at night

R fair flovely
cream 1x1

hyperhidrosis:

(excessive sweating)

التعرق الزائد في اليدين والارجل

AE

physiology mental symptoms

or

emotional
stress

AT and types.

Generalized

mental

Gustatory

↓

and
emotional

↓

physio sympt

↓

after
eating

↓

palm

certain
food

Obesity

Sole

food

Thyroid.

axilla

يبيد سعال

hyperthyroidism

TTT

Medical TTT

Aluminum chloride

20% in alc

الحصبة ليا

الكيرة

- Sun Sola Solution

بوضع المحلول على اليدين

ويترك عشر دقائق

مرة واحدة في اليوم

لمدة أسبوع

- Surgical treatment.

- Botulinum toxin
injection

- sympathectomy.

② antiscabies soap.

① sabinol sup

② sulphur sup

نم الا ستحمام قبل النوم وغسل الجسم
كله بالصابون نم تترك على الجسم
ميداً

③ antiscabies cream or lotion.

permethrin

ectomethrine

5%

للأطفال

للكب

بعد الا ستحمام بالصابون نم يدح
الحجم كله عا عدا الرأس
وسترك على الجسم حتى يجف

تكرر العملية لمدة ثلاث

أيام أو خمسة أيام نم

تكرر بعد أسبوع ١٢ أيام أخرى

+ topical - benzyl benzoate

④ oral anti scabies.

Iverzine tab

(200 - 400) mg/kg

ملائة أقراص مرة

واحدة تكرر بعد أسبوع

rarely used not very safe

⑤ oral antihistamine

children

adult

↓

Zyretic

favegry syrup

قرص قبل
لنوم

سرخس

R/ - Sulphur Soap
1x1 في الليل

- Eurax lotion
1x1 x3

- Scabione cream
1x2

- Iverzin tab
3 tabs every 10 days

سرخس (heel fissure)
اللب

Soft feet cream

foot smart cream

pediculosis

- Cutting hair
- Boiling clothes
- Topical antihistamine
- Topical antipediculosis
- ectomelhrine lotion
- Lucid lotion
- prioderm lotion

سرخس

R/ Lucid lotion
for one hour then
wash.

الطريق

cutaneous Tuberculosis.

etiology: Mycobacterium T.B.

Mode of transmission.

Direct inoculation of skin	endogenous Source.	cutaneous immune reaction.
- T.B chancre	- Lupus vulgaris	- papulonectrotic T.B
- Lupus vulgaris	- scrofuloderma	
- tuberculosis verrucosa cutis.	- orificial T.B	
	- Miliary T.B	

* T.B chancre

Lesion: papulonodule, red ~~Brownish~~ Brownish
painless, enlarge and ulcerate.

fate: Heals by atrophic scar, L.N painful and unilateral.
T.B verrucosa cutis (wart).

Lesion: wart like papule DD → viral wart.

* Lupus vulgaris

Lesion: papulonodule, Apple Jelly nodule.

* scrofuloderma. (عقيدات الجلد)

T.B underlying Structures L.N indurated nodule

* Miliary T.B. ②

Lesion: Papule, Bluish red.

* orificialis.

Lesion: papule, red, edematous, open

- ulcerate with undermined edge.

- ulcer is painful.

TTT = R I P ES

R → Rifampicin

I → INH 600 mg/day if > 50 kg, 450 mg/day if < 50 kg.

P → Pyrazinamide 2 g / day.

E → ethambutol 15 mg/kg/day.

S → Streptomycin S.E.

6 month regimen: Start 3 drugs for 2 months then 2 drugs for 2 months (INH, Rifampicin).

Leprosy (HANSEN'S Disease)

Causative organism: *Mycobacterium leprae*.

Mode of transmission: Droplet.

Skin and nasal discharge contaminated (Blood)

* classification of leprosy.

(3)

Bacteriological
classification

clinical
classification.

- Ip = incubation period.

① Bacteriological classification:

Paucibacillary Leprosy (high immunity)

Multipacillary Leprosy

- tuberculoid Leprosy (TT)

- BorderLine tuberculoid (BT)

BorderLine Leprosy (BB)

(LL) ↓
Lepromatous
Leprosy

BorderLine (BL)

Bactrin. 9/16

② clinical classification.

tuberculoid
Leprosy
(TT)

BorderLine Leprosy

Lepromatous Leprosy
(LL)

- BorderLine Leprosy

- BorderLine tuberculoid.

- BorderLine Lepromatous leprosy.

N.B.

paucibacillary

IT, BT

Stable

Yak Jais

BB

Stable

Multibacillary

L.L

immunological test

Leptomin test → positive in IT

Skin smear → no bacilli

N.B: intermediate leprosis

late

Spontaneous

LL

TT

in TT → ^{nerve} affected first then skin.

LL → skin affected first.

BB rule

TTT of Leprosy

Treatment duration of paucibacillary.

(IT, BT)

6 months.

TTT of multibacillary.

(BB, BL, LL)

is 2 years

↓ Dapsone (100mg daily after meal), Rifampicin 600mg monthly

follow up for 2 years

after end of therapy



الطبيب

TTT of multibacillary is 2 years.

(5)

Dapsone 100 mg daily after meal.

clofazimine 50 mg daily

Rifampicin 600 mg monthly

clofazimine 300mg monthly

follow up for 5 years after end of therapy.

المريض قد يأتي بـ patch

characteristic of patch.

- No hair
- No sensation
- No sweating
- No bacilli
- color change.

x Dermatitis.

eczema.

all are dermatitis but not all dermatitis eczema.

types.

endogenous

exogenous.

- atopic

- contact dermatitis

- seborrheic.

- Napkin dermatitis.

- Dyshidrotic → deep vesicles

- infective dermatitis

- Stasis

← irritation

← pus

← 2e

موضوع الدرس :

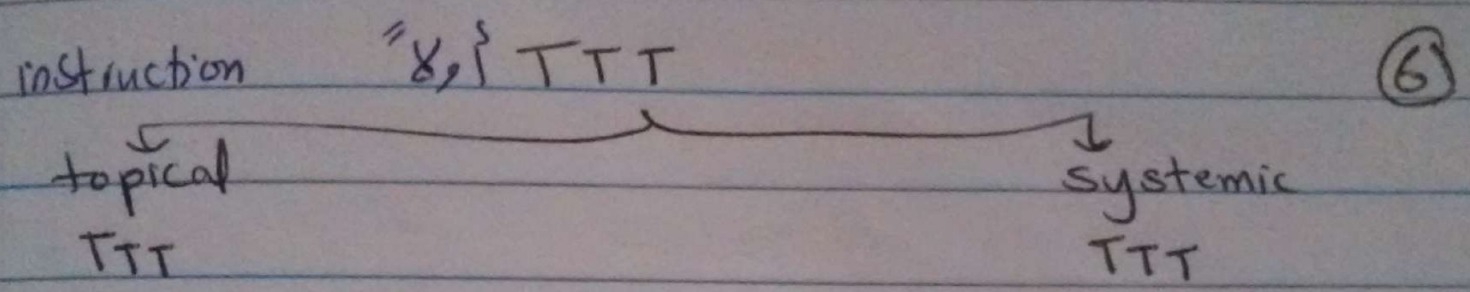
تاريخ :

٢٠ / / ٢٠٢٠

اليوم :

الموافق :

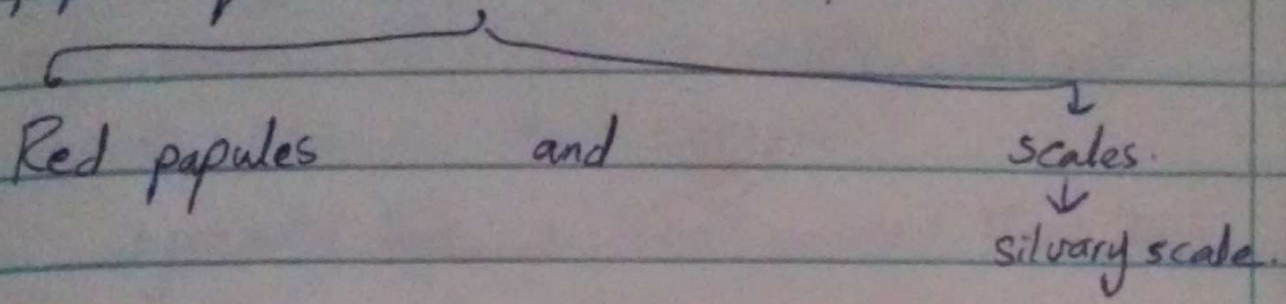
١٤ / / ١٤٤٠ هـ



- topical steroid
- topical soothing agent.
- oral antihistamine
- systemic

psoriasis:

papulosequamous disease which present with.



- Causes: unknown.

- ① Genetic predisposition 5%
- ② epidermal proliferation → زفارة
- ③ vascular proliferation → Layer by Layer { Bleeding, beaded sign }
- ④ immunology.

Clinical Features:

- often asymptomatic, mild itching in plexural psoriasis.
- the primary psoriatic lesion is sharply circumscribed, erythematous, plaque, covered by laminated silver scales.

↓ زفارة

Site: most commonly affected include extensor surfaces of limbs especially on elbow and knee, ~~scad~~ sacral and scalp.

epidermal proliferation. جرس,

clinical types of psoriasis:

chronic plaque psoriasis (psoriasis vulgaris)

most common clinical type -> annular - discoid.

Guttate psoriasis affect children.

typically there are small pointed Rain drop

Like Lesion

scalp psoriasis :- erythematous well defined.

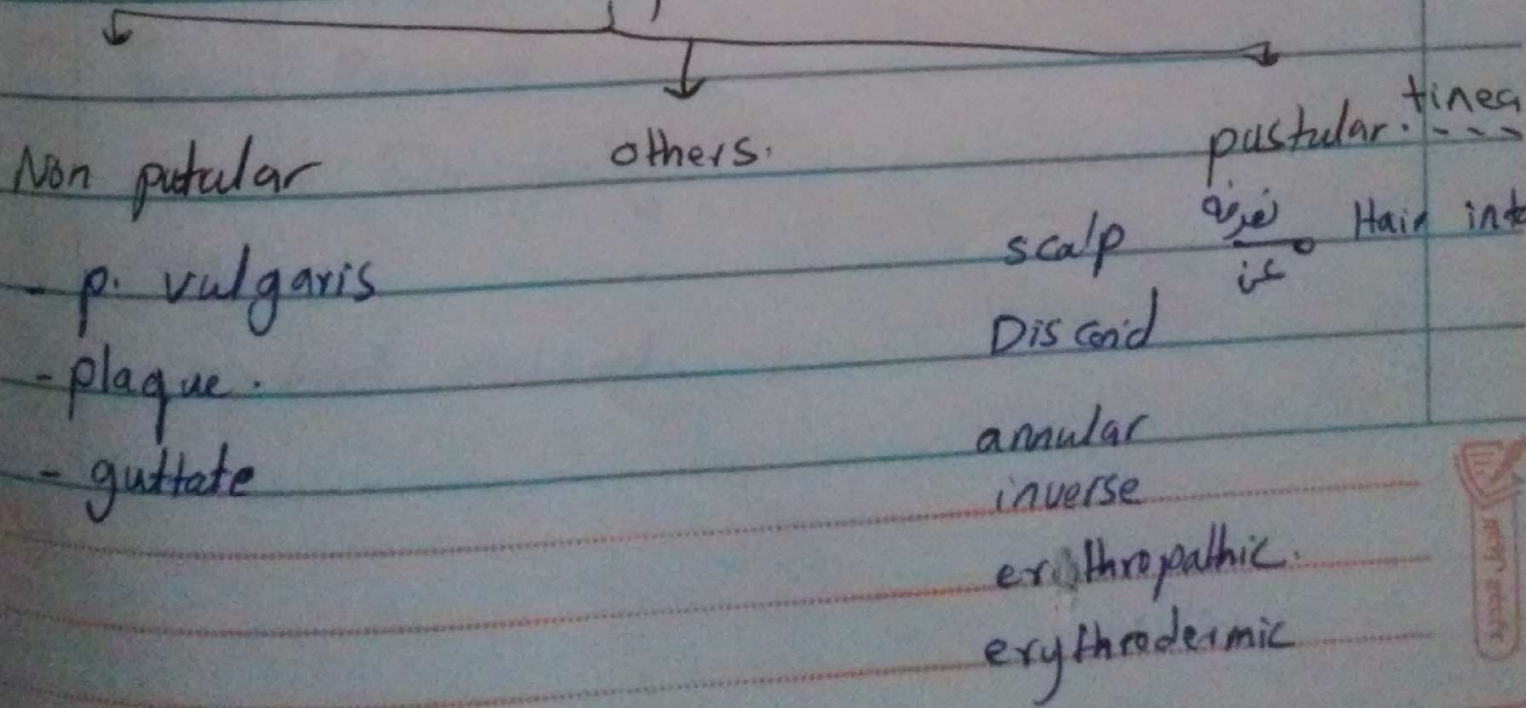
scalp area -> Hair intact

flexural psoriasis: affection of flexural ^{groin} axilla.

palmoplantar psoriasis

nail psoriasis -> oil drop, pitting ^{منشوف كلى الاظفار}

تقسيمه لثلاث

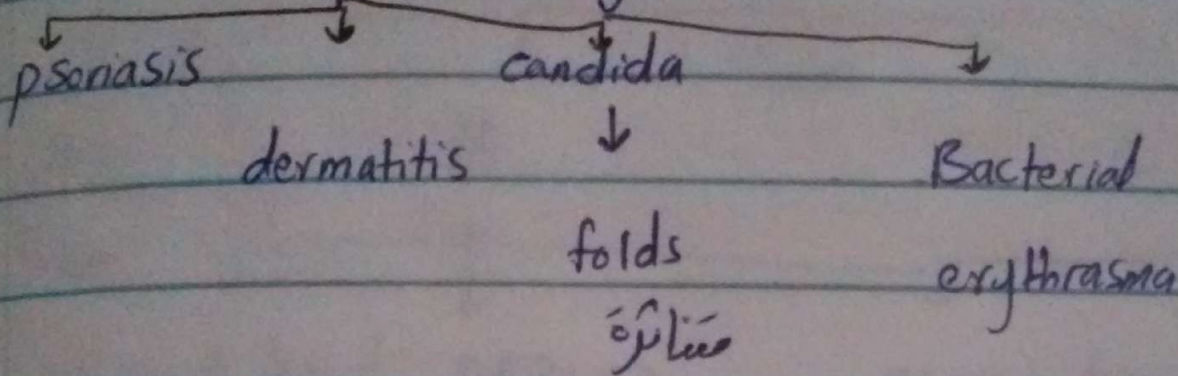


inverse psoriasis: flexural

skin folds

من الجيوب في

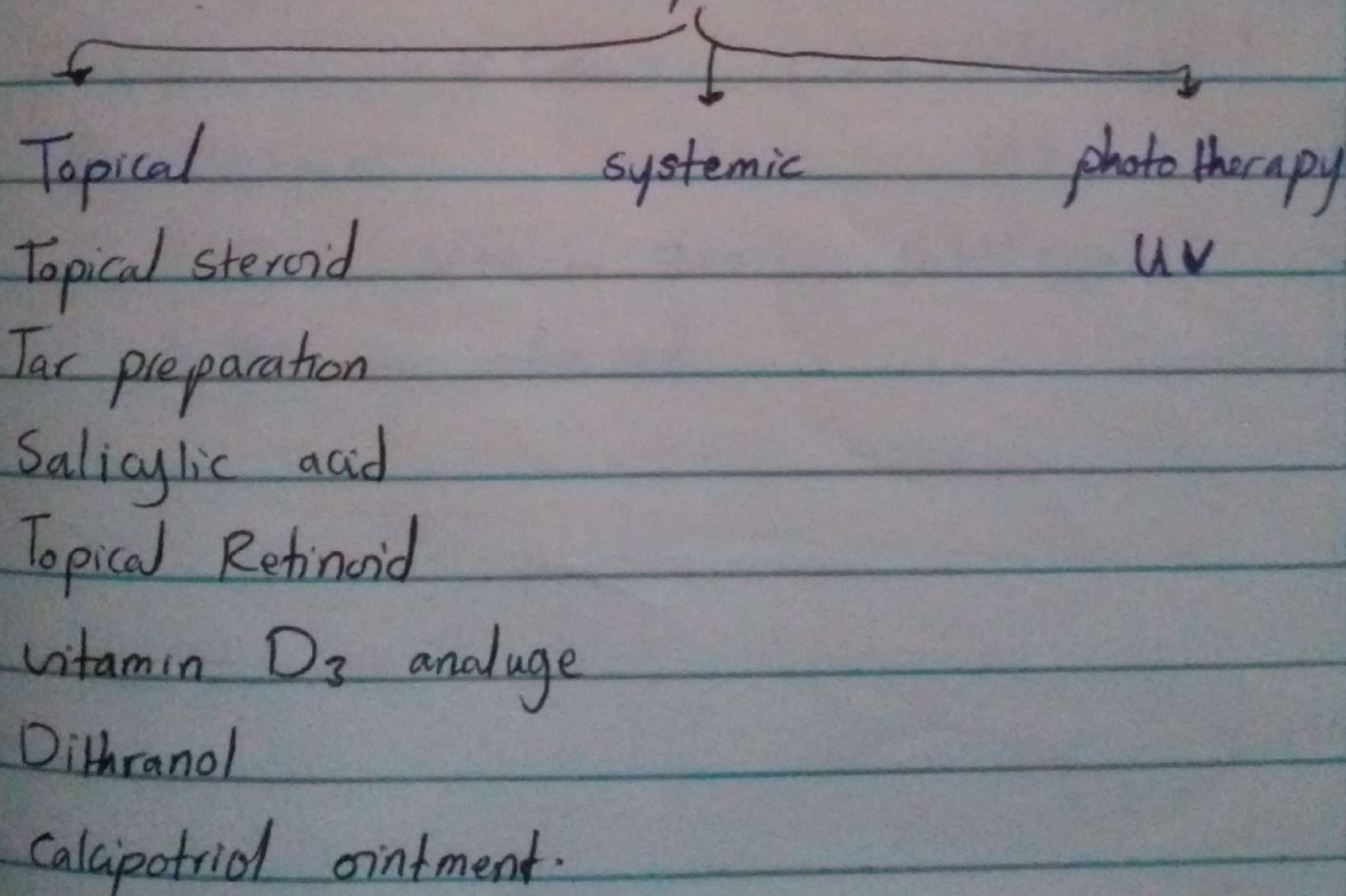
DD of intertrigo



pustular psoriasis

في أنواع

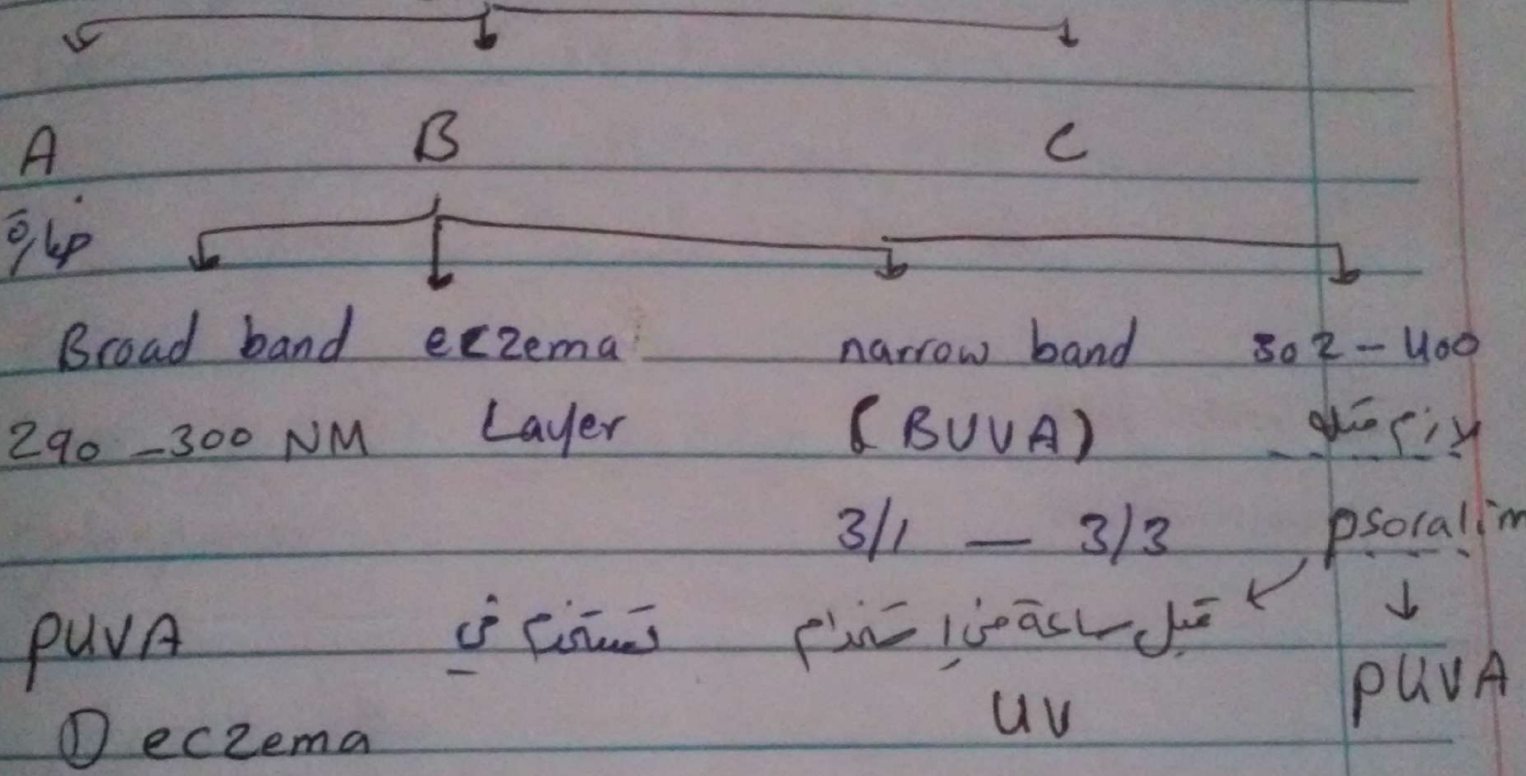
TTT of psoriasis



N.B

UVB (narrow band or broad band)

types of UV



N.B: 400 - 700 الضوء المرئي

> 700 - infra red

2) Systemic therapy:

(11)

- methotrexate + folic acid

dose: 0.2 - 0.4 mg/kg/weekly. → نزل له حبيبات

S.E: hepatotoxic

Dose:

حبيبات لصباح، حبيبات المساء
و حبيبات ليوم التالي
و سكر الحبة أو سوجيا

2) Retinoid.

dose 0.5 - 1 mg/kg/day

acitrintine

3) cyclosporine

acitritine

* pityriasis alba

أهم ما يميزه herald patch
تلون واحدة

أمراض التي تترك

Hyperpigmentation

hypopigmentation

- Lichen planus

- psoriasis

- pityriasis versicolor

- PR (pityriasis Rosea)

Hypo-

hyper-

-pigmentation

pigmentation

acne.

(12)

Def:- chronic inflammatory disease of the pilosebaceous duct $\rightarrow$ due to obstruction.

Aetiology: unknown.

pathology: ① pilosebaceous duct obstruction due to hyperkeratosis.

② hormonal $\uparrow$ androgen ③ p. acne.

clinical features: $\leftarrow$ mild $\rightarrow$ severe. $\rightarrow$ skin

Come done $\rightarrow$ characteristic for acne.
 $\swarrow \searrow$
White Head Black head.

it is polymorphic

post acne scar $\rightarrow$ true scar

clinical comp vls TTT

mild moderate severe.

TTT

Topical

① T. antibiotic

clindamycin erythromycin

② topical Keratolytic tretinoin

③ Topical azelic acid

④ Topical ↓ adapalene

Systemic

① systemic AB

② systemic tretinoin

في حالة severe نقرس

① LDL ② LFT

③ pregnancy test

N.B: يجب توقف الحمل بعد توقف العلاج لمدة 14 شهر

في ال female
Contraceptive → cyproterone
adult female
نقطة

N.B

isotretinoin

من ضروري في كل مرة

التي هي

120 mg/kg → total dose
مدة 8 أسابيع

Anti histaminic Drugs.

Histamine is chemical substance that mediate allergy inflammation - gastric acid secretion.

Antihistamin.

first generation

الجيل الأول

- Diphenhydramine

- Chlorpheniramine

- Dimethindene

- Ketotifen

second

generation

الجيل الثاني

- Loratidine

- cetirizine

- fexofenadine

third

generation

- Levocetirizine

- Desloratidine

Uses of antihistamine

allergic inflammation

Motion

Skinness

insomnia

cough.

- Melizine

- Cyclizine

* Some trade names:

- Chlorpheniramine
allergy 4 mg tab
Dose: 4 mg / 6 hour

- pheniramine
avil 15 mg / 5 m
avil tab > 5 mg
يا فير في ال ربح

- Dimethindene
fenistil 1 mg
fenstil

- Demastine
tavegil 2 mg amp

- Chlorphenoxamine
allergy.

Ketotifen
- ketotic
- azalastine
- zelastine

2nd generation.
Cetirizine
Zyrtec.
alerid

Loratidine
Lorano, clarine
Mosedine, Lorine.

3rd generation
- Desloratidine
Deslorat

- fexofenidine
telfax, fexon.

Hair disorder

① alopecia

types

catrificial

non catrificial

circumscribed

diffuse

alopecia

areata.

topical sensitizer

Diphenylcyclopropenone

anthraline (Local)

puu

في الحالات المستعصية نستخدم

menoxidil

او

① alopecia areata

Common Skin order characterized

by sudden loss of Hair in
circumscribed area.

Differential diagnosis:

- trichotellomani
- Telogen effluvin

TTT

① reassurance and Ht of
predisposing factor.

- intralesional Steroid

N.B

Topical Minoxidil

اسم العلاج المو طبق للصراع الوراثي

trade name

Dminoxidin 5%

Rehair

للرجال

minoxidil 2%

Hair gain

Method

٦ ، حبات في الا سبوع الاول

سبباً حلاً ومساذاً الا سبوع الثاني

وليام وليام الا سبوع الثاني

رابع ا سبوع مرتين فقط

② topical Shampoo
for Hair nutrient.

protecare Shampoo

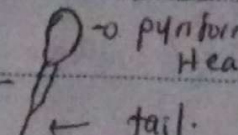
Hair plex

anagen.

Stages of spermatogenesis:-

Spermatogonia → primary spermatocyte → secondary spermatocyte → spermatid → then sperm

في نهاية المبيض النوى تكون على شكل كروي دون ملامع بيروية انقسامات وكوابل
الى الشكل التالي



pyriform Head
Body
tail.

(This is controlled by Hormones) ← epididymis
↓
secreted from ant part of pit (which is controlled by hypothalamus by GnRH to secrete FSH, LH → act on Leydig cells.
↓
act on Sertoli cells which found in testis.
FSH, LH, Germ → Semen (high) + sperm.

والذي ينتج من هذه الغدة الـ testosterone الجزء الأكبر من ربح للم عتبات
جزء بسيط منه يحمل عن طريق مراكب معين وينصب في tubules

والتي تسمى في علمه الـ Spermatogenesis

التالي (testes, LH, FSH) في علمه الـ Spermatogenesis

* hypogonadal axis: إذا حصل خلل يؤدي إلى العقم
Halamo

Causes of infertility:-

- testicular, caused testicular. هنا ثلاث تصنيفات الأولى

(pre-testicular) ← Functional, obstructive (post testicular) (pre-testicular) ← Functional, obstructive (post testicular)

- (pre and post) testicular. هي التصنيفات الأخرى

* testicular causes-

- trauma either indirect → الحارة (لغالبين الفرس) chemo therapy.
direct.
- inflammatory → orchitis → inflammation of testis.
by viral, Bacterial, TB, leprosy.

MICARDIS
TEL MISARTAN

MICARDIS PLUS
TEL MISARTAN + HYDROCHLOROTHIAZIDE

Organ-specific Protection
beyond 24-hour BP Control

(2) - Congenital - undescended testis - differentiated from Retracted testis by it retracted during anenxity. and descend during quest.

instead of pyriform (contain acrozyme (enzymes)
which penetrating the osium. $\downarrow$ proteolytic
act on testicular

- Vena $\rightarrow$ varicocele

orchitis testicular torsion کی نفرت میں

redness / Swollen testis) so differentiate between them by ~~duplex~~ (scrotal duplex)

and need urgent surgery during 24 hours.

trauma في سياقة عكفا من احدى الا سنان قد ال testicular causes ال

الحارة للعاطين القرن أو ال

Freezing Sperm ← Sperm ← Chemotherapy

بسم الحق تحت المصهر، ويحلوا عدة تلقحات ~~في~~ ^{لدى} المستشفى، والسلامة لنا صحة

تَحَقَّنْ فِي رَأْيِ الْمُرَادَةِ وَبَعْدَ عَشْرَةِ أَيَّامٍ نَشُوفٌ إِذَا صَعَلَ عَلَى مَلَايِصِ نَبِيَّةِ الْأَرْضِ الْهَلْهَلَةِ

تجميد لعنات ما عكنا مع ال Sperm freezing، وهذه العملية لـ (ICSI)

intra cytoplasmic sperm injection.

- post testicular or obstruction causes:-

problems in the way of sperms like ejaculatory duct, epididymis and vas deferens or prostate infection. also may be due to (MAOI) → Male accessory gland infection or immunological cause, anti-sperm antibody in vagina of female

obstruction → true
congenital (unilateral or Bilateral absence of vas deferens)

So there is no way
عشان كده المريض بالكيف الا بيسوي الفرج لباله اللي
ICSI عن طريق فتح الـ testis

testicular sperm extraction (tESE)

testicular sperm aspiration (tesa)

(pESA) percutaneous epididymal sperm aspiration
(ICSI) Intracytoplasmic sperm injection.

- pre testicular causes (problems in hypothalamus and pit gland or one of them). (may be congenital, traumatic, inflammatory, Neoplastic).

if there is problems in pit or hypothalamus there is decrease in FSH and LH so there is no sperm and testosterone.

* Low pitched sound,
Spared hair, small size testis, seminal vesicles and prostate hypoplasia

So there is few or absence of semen also, No muscle and Bone weakness so if

testosterone deficient and one or more of these characteristic deficiency appear

MICARDIS
TELMSARTAN
MICARDIS PLUS
TELMSARTAN + HYDROCHLORIDE
Organ-specific Protection
beyond 24-hour

(4)

called hypogonadism

FSH, LH → called gonadotropin

pit or hypothalamic

this lead to decrease FSH, LH, testosterone and sperm and

this called hypogonadotropic hypogonadism

FSH, LH hypogonadism and pit

↓ testosterone ← due to trauma or ← testis

testosterone FSH, LH

hypogonadotropic hypogonadism

(KFS) → Klinefelter syndrome

أسهل معرفة لسبب عشان نفرف لنشخص ونعالج

طبيب تشخص المرض عن طريق

History, Examination, investigation, Diagnosis and treatment.

History: personal History: Name age, occupation:

Marital Status and number of his housewife,

Special habit: Smoking, Alcohol,

مقاومة تأخر على الخصوبة

Sexual history → (Frequency: Number of coitus)

one / year in case of emigration or one / 3 months

also may be due to decrease desire ← depression organic cause.

sever pre maturity ejaculation.

Sexual history.

لبنه ال

في الحاضره لقارعة - كل ما لا يكون

past history: (operation (Like hernia, operation for varicocele), Disease
 Like DM may cause Retrograde ejaculation or an ejaculation, CLD, CRD
 or trauma and May be drug like.

testosterone injection (I.M)
 Supraphysiological. physiological. Negative feedback
 to hypothalamus and pit and No production of FSH, LH →
 which is responsible for spermatogenesis.
 Negative feedback to FSH, LH, and testosterone.
 Negative feedback to estradiol.
 Contraceptive in male.
 60,000,000 sperm per ejaculate.

* Examination: Look to testis by examine scrotum the testis
 connect with epididymis which ascend upward and epididym contains
 as spermatic cord which contain blood vessels, nerves, lymphatics,
 muscle, but clinical difference → present or absent.

Investigation:- Semen analysis (Corner Stone of Diagnosis)
 WBC, scrotal duplex (varicocele)
 Urine tract, penile duplex, genital tract
 Urine analysis, prostatic discharge analysis, semen culture.
 (TR US) (per rectum) PR examine
 Urethra, rectum, semen.



(6)

- treatment : Medical - surgical - ART (assisted reproductive technology) + التلقيح الصناعي
in vitro fertilization (IVF)
أخصاب خارجي
السائل المنوي حيز منه لتتوفر بالعن حيزه لتتوفر
بالمعيرة المطلوبة

⊗ Volume: Normal 1.5 mL or more.

إذا أقل من 1.5 يقال عليه oligospermia

وصف السائل (Spermia)
الحوانات المنوية أقل oligozoospermia - وصف الحيوان (zoospermia) حيوان
من الطبيعي
إذا ما نبت سائل منوي من الأ - azospermia.

Now aday called Low semen volume.

- pH: alkaline.

- Concentration: 300,000,000 — 15,000,000 / mL
الأحد

↓ لو نشي نطو ال Count

Concentration x volume

قلة العدد صف الحيوان المنوي
- oligozoospermia
- Azoospermia ما نبت حيوان منوي

- Motility: progressive (32% or more) non progressive.

↓ نشي نطو

according to WHO 2010

→ انه الانسان الطبيعي حيزه يكون
لحد ال progressive 40% أو أكثر

قلة حركة الحيوان المنوي
- as then zoospermia.
- Micro zoospermia ما نبت حركة
↓ died sperm

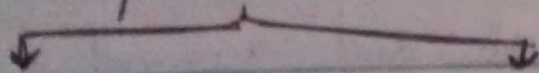
male infertility

key points →

physiology

essential physiology

productive system



primary

sex organ

- testis

- epididymis

- VD.

accessory

sex organ

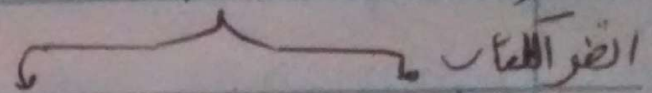
- SV

- prostate

- ureter

- penis.

testis →



Seminiferous

tubules

interstitial

tissue.

400-600 Seminiferous tubules.
each testis.



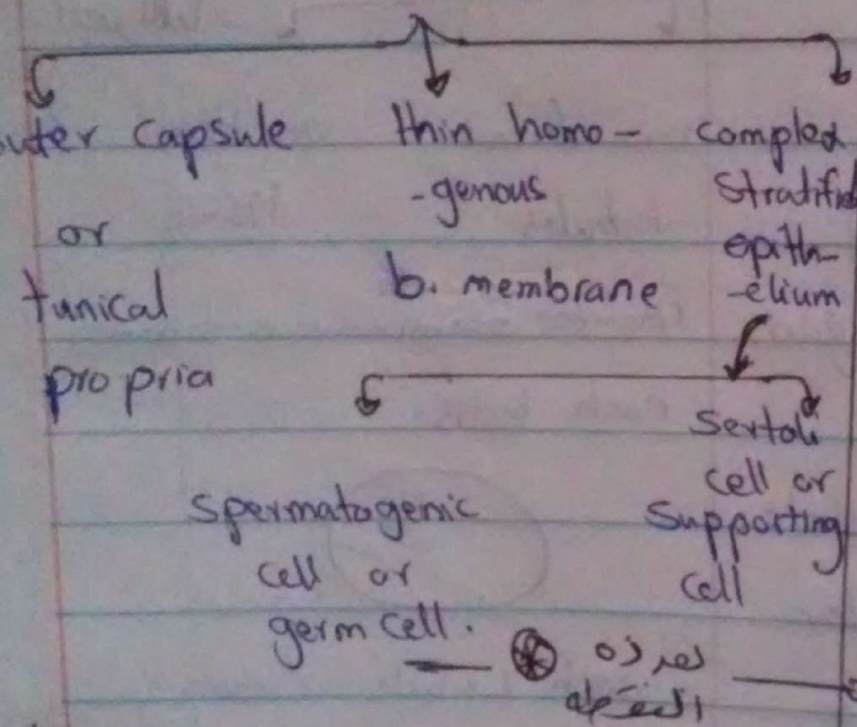
each lobule contain
1 to 4 Coiled tubules
as → SFT

are surrounded supported
by interlobular CT.

SFT

Seminiferous tubules

wall of SFT is formed by three layers:



Through different stage of spermatogenic cells seen from periphery to the Lumen of SFT are:

- Spermatogonium
- Primary spermatocyte
- ...
- Spermatid

① Spermatogenic cell:

↓
precursor of

Spermatozoa (this cell lie in between Sertoli cell and arranged in orderly manner in 4-8 layers.

- in children not fully developed

- Spermatogenic cell as primitive cell with the onset of puberty

Spermatogonia developed up into sperm

- Sertoli cell are supportive cell for spermatogenic cell in SFT

- Nurse cells

Through different stages of spermatogenesis
cells seen from periphery to the lumen
of SFT are: - Spermatogonium
- Primary spermatocyte -

pathway for the passage of
sperm

Seminiferous tubules.



Pete of testis



vas efferense



Head of epididymis



VD



ampulla.



ejaculatory duct



urethra.

Sertoli cell are supportive cell
for spermatogenic cell in SFT ^{called} Nurse
cell

- are Large extending from
Basement membrane to
Lumen of SFT

- Germ cell present in SFT
attached to sertoli cells by
means cytoplasm
connection.

- This attachment between
germ cell and sertoli cell
exist till the matured
spermatozoa are released into
Lumen of SFT

(Spermeation)

* Function of Sertoli cells:

provide support and support, nourishment for
Spermatogenic cells present
in SFT

- Sertoli cells:

① Support and nourish
the spermatogenic cells till
the spermatozoa are released
from them

② Secrete the enzyme aromatase
which convert androgen
to estrogen

③ Secrete androgen binding
protein (Abp) which
essential for testosterone
activity specially during
Spermatogenesis.

④ Secrete inhibin
inhibin $\rightarrow$ inhibit FSH

⑤ Secrete activin.
opposite action of
inhibin

⑥ Secrete estrogen binding
protein

⑦ Secrete Mullerian regression
factor

in fetal testis
 $\downarrow$
regression of Mullerian duct
during sex differentiation
in fetus.

Blood testis Barrier (BTB)

- mechanical barrier.

that secrete from SFT of testes.

- It is formed by tight junction between the adjacent Sertoli cells / near B.M of SFT

* Function of testis.

two function.

Gametogenic function

Spermatogenesis

endocrine function.

secretion of Hormones.

- functions of BTB.

① protection of SFT from toxin (AID)

② prevention autoimmune

Damage of BTB



By e.g: trauma, mumps
by destroy germ cell



Sterility

① Gametogenic function-
Spermatogenesis

is process by which the male gametocyte called spermatozoa (Spermatogonia) are

formed from Spermatogon

takes 74 day

is ip l ↓ f per
• o ju



- Stage of spermatogenesis
(4)

- Stage of proliferation ^{mitotic}

mid Stage growth 1st sperm

- Stage maturation

- Stage transformation

↓
mature sperm 2nd sperm
mitotic

Maturation

first
phase

second
phase

1st spermatocyte
each

primary each
Secondary sperm

↓
divide into two

↓
goes to

Secondary spermatocyte

two
spermatoid

23 chromosome

① Sertoli cells.

② Hormones

③ other factors

- Sertoli cell

influence spermatogenesis
by germ cell

- Support and nourishment

- providing hormonal substance
necessary for sperm

secrete ABP

essential for testosterone
activities

- release of sperm.

* Factors affecting spermatogenesis
influenced to

cells stimulating hormone to

LH: is called interstitial

necessary for spermatogenesis

testosterone in sertoli cell

- estrogen is formed from

- action.

- inhibin

- GnH

- LH

- estrogen remaining - stage in spermatids

- testosterone - sequence - genesis - initiation of spermatogenesis

spermatogenesis.

- Hormones necessary for

by many hormone.

spermatogenesis is influenced

spermatogenesis.

- Role of hormone in

essential for secretion of

testosterone from Leydig cells

- GnH:

- General metabolic process

axis in 4 stages.

Stage

1

FSH, testosterone

2

testosterone, LH

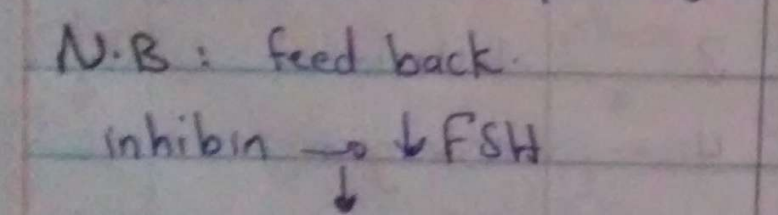
3

testosterone

4

estrogen

hypo -



inhibin $\rightarrow$ $\downarrow$ FSH

testosterone — inhibition
injection — inhibition

* Sources of androgen secretion.



N.B.

plasma level.

testosterone

300 - 700 ng/dL

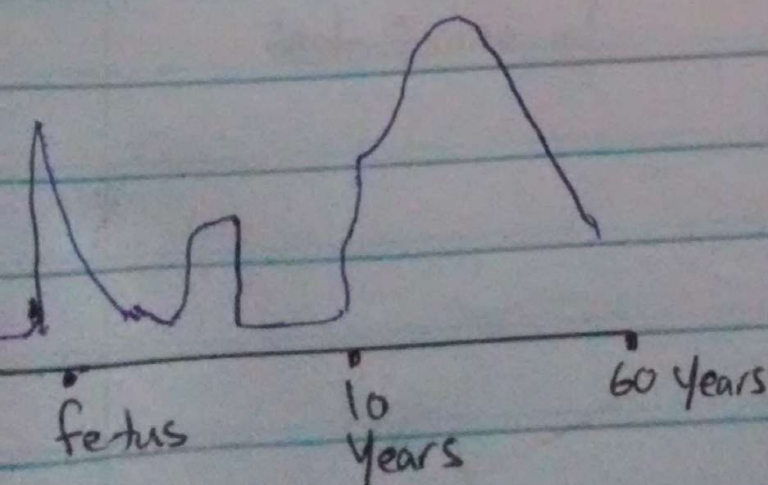
adult male

Adult female 30-60 ng/dL

Metabolism

Converted to Dihydro-
-testosterone
most active.

estradiol
in Liver



* Function of testosterone.

↓
fetal Life.

① Sex differentiation
in fetus.

② development of
accessory sex organs

③ Descend of testis



Cryptorchidism

TTT

if inguinal canal
wide

↓
testosterone or
gonadotropic hormone

narrow
↓
Surgery.

- Function of testosterone in adult:

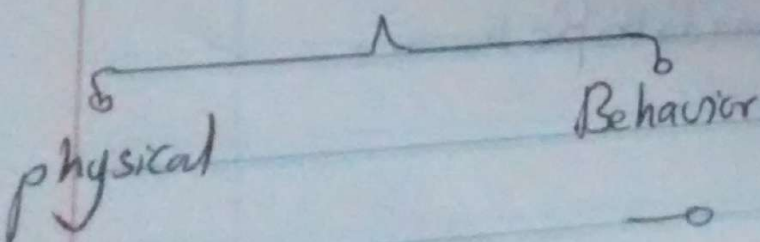
- ① effect on Sex organ
- ② effect on secondary sexual character.

- effect on Sex organ.

↑ size of penis / scrotum
8 fold at puberty to age 20 years.

testosterone necessary for Spermatogenesis.

- effect on secondary sexual character.



The characteristic appears at time of puberty

- testosterone responsible for development of secondary sexual characteristic in male.

① affect on muscular growth.

② affect on Bone growth.

③ affect on Shoulder and pelvic bone

④ affect on skin

⑤ affect on Hair distribution.

⑥ affect on voice.

Regulation of testosterone
in adult.

LH → Stimulate
Leyding cell



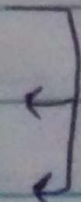
Secration of LH from
pituitary stimulated
by LH RH from hypothal-
-amous.

- feedback control.

LH RH

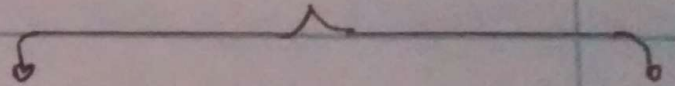
LH

testosterone



hypogonadism

Def: condition characterized
by reduction in function
activity of gonads
types.



testicular hyper-
-gonadotrophic
hypogonadism

due
to



in gonadotropin
(pituitary or
hypothalmons)

hypogonadotropic
hypogonadism

AE: Congenital
Cryptorchidism

- infertility

Def: Failure to conceive after one year of unprotected regular intercourse

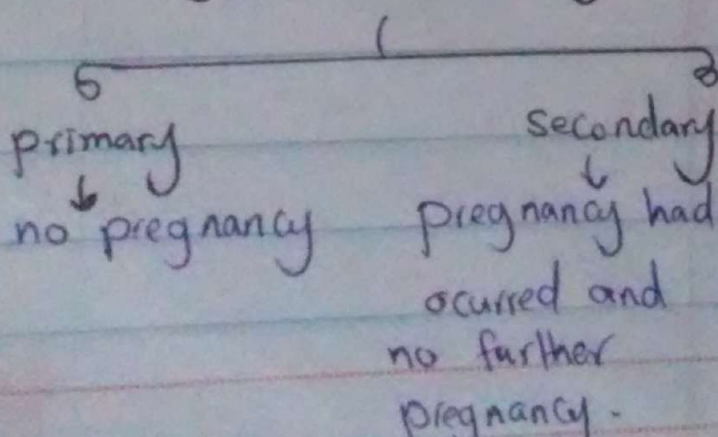
- Subfertility:

The probability of spontaneous conception may be decreased but not reduced to zero

- Sterility:

permanent and irreversible infertility

* types of infertility

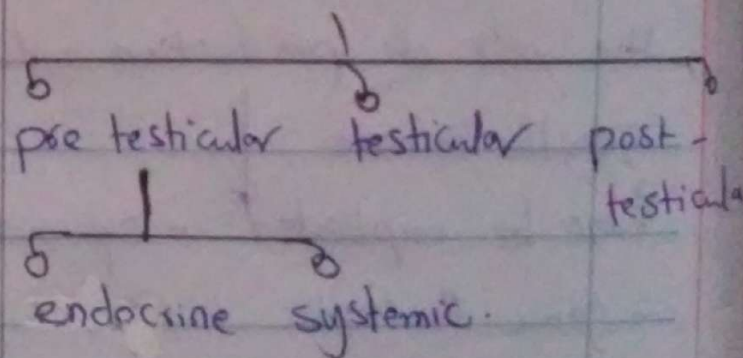


Causes of infertility.

- ① male factors alone 30%
- ② female factors alone 40%
- ③ Combined 20%
- ④ unexplained 10-15%
↓
(unknown cause)

Male infertility.

AE

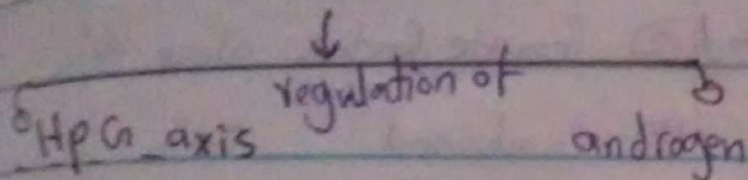


endocrine causes:

- ① Hypothalamic Cause
Kallman's triad.
- ① hare Lip
- ② cleft palate
- ③ anosmia

N.B. vlt idp X

Role of Hormone in



See above.

1.1

- non-gonadotropin hormone.

The role of production and growth hormone

have been implicated in spermatogenic function.

① prolactin
↓
anti-pituitary and
↓

May play role in regulation of testosterone

receptors found on hypothalamus also suggest there must be more central.

central role in the maintenance of Male infertility

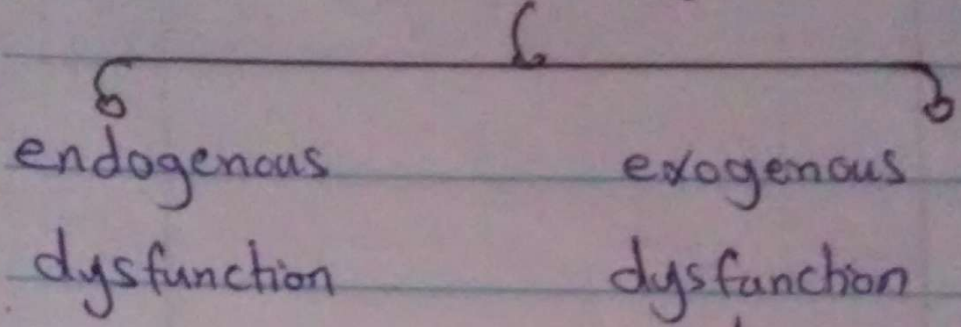
- there is evidence to support prolactin regulation by factors within the testis and pituitary.

- the prolactin play role in sexual behaviour

- GH
↓
has anabolic process



Male endocrine dysfunction



iatrogenic

اللي بسبب دواء

① testosterone

② estrogen

③ androgen

زيادة اللي

hyperprolactinemia

HPS - hypothalamic pituitary gonadal axis

① Endocrine (endogenous) ① prolactin ↑ as
dysfunction with HPG axis

can occur for many reasons

the testosterone provide more

accurate assessment of man

androgenic function.

+

↓ SHBG

↓ Sex hormone binding
globulin

② endogenous influences

from outside the HPG axis

in addition to both.

endogenous and exogenous

factors listed earlier.

- there are endocrine factors

beyond the HPG axis

may affect spermatogenesis

e.g. acromegaly.

spermatogenesis.

may actually inhibit

endocrine dysfunction

* GH

and no acromegaly.

present. - lead to oligospermia

hybrid abnormalities if

N.B.

- ↓ level of estradiol.

- change in HPG.

developmental abnormalities.

- testicular and pituitary

- sex steroid metabolism

proposed medicine alteration in

② hybrid abnormalities

③ dopamine agonist

③ Supra renal !!

③ iatrogenic dysfunction.

testicular dysfunction

can occur because

↓ errors

growth metabolism of testis

- the most common:

↑ testosterone replacement.

↑ testosterone

inhibit ↓ HPG axis

and indirect inhibiting through* congenital
periphery aromatizing to
estradiol.

* clinically
testosterone
replacement

④ su

② systemic

① Renal, respiratory,
pancreatic.

testicular causes:

① Congenital.

② traumatic

③ inflammatory

④ neoplastic

⑤ vascular

① Klinefelter & chromosomal
defects

② congenital varicocele

③ cryptorchidism

④ sperm disorder

(abnormal morphology)

Globozoospermia

or immotility

after -
15
→ forsen
under

edema
+
pain
+ signs of inflammation -

- epididymo orchitis

T. 13

e.g.: mumps, orchitis

③ 1.45 mm

drug freezing

(2) testicular operation.

traumatic
excess heat

formatic

Summer

It is clear from that *Cryptococcus* inflammation is commonly painful in men with infertility.

but it is also clear that are

Limited meat to

non-invasive diagnosis

The presence and causes of

inflammation.

- although in accurate the

presence of elevated numbers

of leucocyte in the semen is the

most widely used non invasive

marker

that is presently available

for (an) inflammation for men

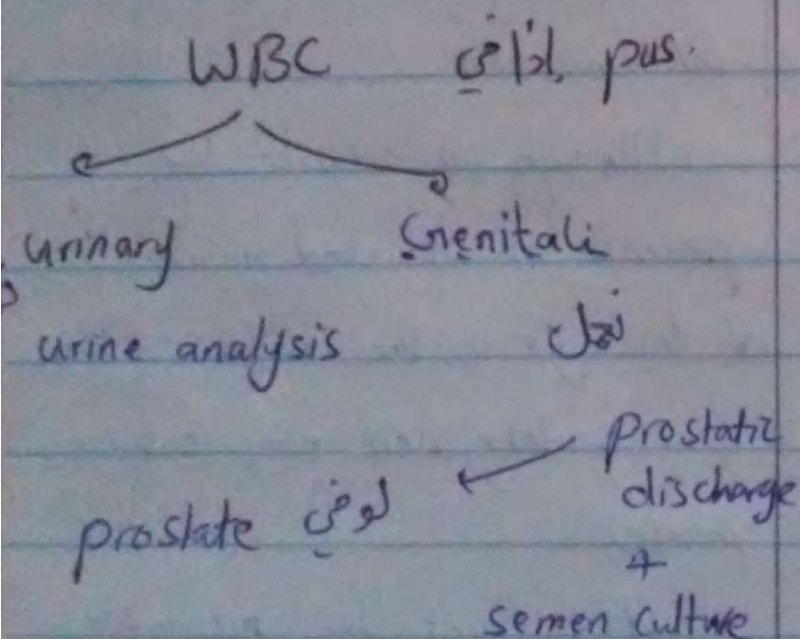
with intensity.

- pyospermia is associated with significantly impaired sperm parameters and function

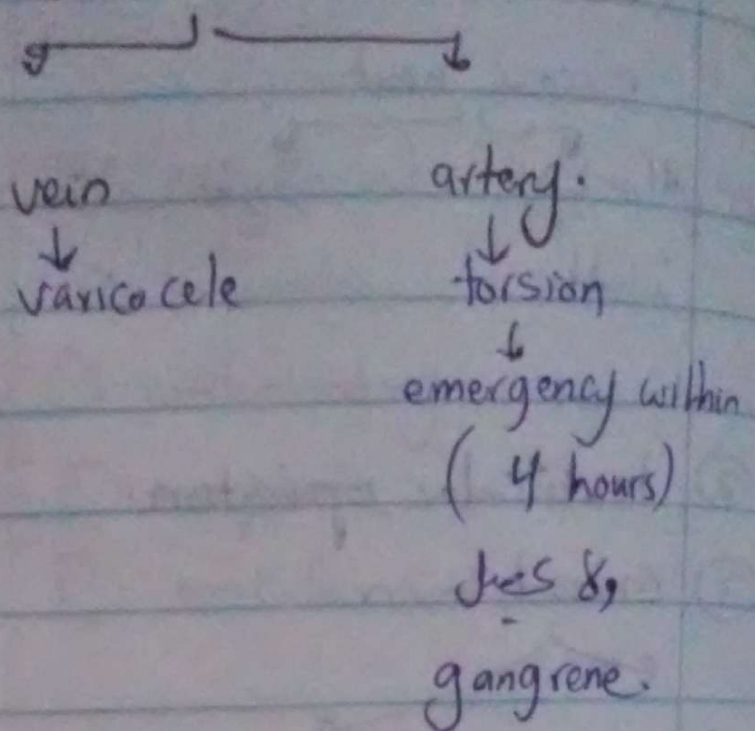
TTT with men with pyo-

- spermia using empiric AB

- ① antibiotic
- ② anti inflammatory
- ③ anti oxidant.



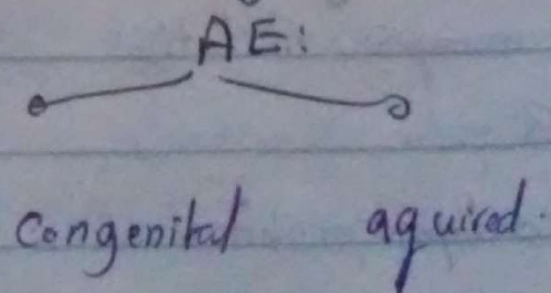
④ vascular.



varicocele.

e Longated, dilated, tortous
veins

- Commonly on left side



- presistance of scrotal hyperthermia.

↓
U/S Doppler
duplex.

other causes

Drugs

explained

Genetic

antioxi

idiopathic

the reversibility of Leydig
cell dysfunction with varicocele

TTT

remove controversy

Semen

Sever

oligozoospermia
and ↓ testosterone

* post testicular

mechanical

obstructed

premature ejaculation

erectile dysfunction

obesity

congenital

acquired

Azoospermia

obstructive

recurrent duct

obstruction

40% of all azospermia

any where

non obstructive

congenital

acquired

varicocele

Diagnosis:

meticulous PE

is para - - - - to
accurately diagnosis of
varicocele

- Duplex V/S

G₁ palpable only with
standing and with VM

G₂ palpable with pt
standing without VM

G₃ visible through
the scrotal skin and
palpable with pt standing

① Rete testis affection
epididymis, VD
ejaculatory duct

obstructive azoospermia
(absence of sperm in
ejaculate)

congenital
↓

U.D

congenital
untill
absence of
U.D
(CUAVD)

BAVD

varicocele
+
semen
azoospermia

acquired.

- trauma.

- infection.

TT of epididymal
obstruction.

① pESA

percutaneous epididymis
sperm aspirate (MESA)

② Microsurgical

epi-sperm aspiration

Diagnosis

○ A characterized normal
testicular volume

FSH and azospermia

- history of PE important
to difference

OA

NOA

ejaculatory duct obstruction (EDO)

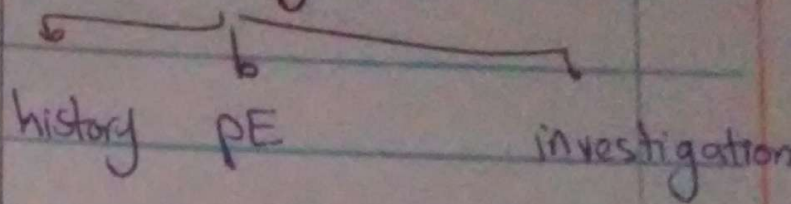
classically defined.

- Low semen volume
- Low semen pH
- absence fructose in semen (basic, fructose)
- positive fluid is the normal contribute of seminal vesicles.
- Digital rectal examine → for identify → RF for.

EDO include:

minimal prostate
or SV bilateral
Trus - EDO

Diagnosis of male infertility.



① History ^{سابقہ}

① personal : name, age, sex, habit + occupation.

② FH

③ H.O.P.T

④ sexual

⑤ past